

REMARKS/ARGUMENTS

Claims 1, 3, 4, 7, 8, 10, 11, 12, and 16-21 are pending.

Claim 14 was objected to for being the same as claim 5.

Claims 1, 4, 6-8, 10, 13, and 15-17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Connor et al, U.S. Patent No. 6,295,611.

Claims 2, 3, 5, 9, 11, 12, 14, 20 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Connor in view of Goldstein et al., U.S. Patent No. 6,665,815.

As to the objection to claim 14, the objection is moot as claims 5 and 14 have been canceled.

The claims have been amended to further distinguish over the cited art. No new matter has been added. See, for example, Figs. 4-6 and their corresponding descriptions in paragraphs [0034-0040] in the specification as originally filed.

Claim 1 recites in part "creating a plurality of snapshots of the data stored in a particular storage system , each snapshot constituting an image of the data stored in the storage system." See also independent claims 8 and 17.

The examiner asserted that Connor's storing of "essential objects" in persistent memory described in column 3, lines 8-14 teaches the recited "snapshots." Connor's "essential objects" are data objects created and used by software program, and are those data objects which contain data that cannot be recreated during a recovery operation when the software crashes. *Col. 3, lines 1-5*. Thus, Connor teaches storing a portion of the state of execution of the software in persistent memory. At best, Connor teaches creating a snapshot of part of the data state of the software. By comparison, claim 1 recites creating a snapshot of the data in the storage system. The pending claims are directed to storage systems. Those of ordinary skill in the storage system arts understand the term "snapshot" (especially the phrase "snapshot of the data stored in a particular storage system") to refer to an image of the data that is stored in the given storage system, not of the data in a piece of software. Connor therefore does not teach "creating a plurality of snapshots of the data stored in a particular storage system , each snapshot constituting an image of the data stored in the storage system."

Claim 1 further substantively recites in part “performing a data recovery operation on a snapshot” and “if the operation is successful, then designating the snapshot as being consistent, and if the operation is unsuccessful, then designating the snapshot as being inconsistent.” See also claims 8 and 17.

Connor describes a recovery process, beginning at column 6, line 31. There is a phase 1 recovery step in which the values of the essential objects stored in persistent memory are read back from persistent memory to re-instantiate the data objects. *Col. 6, lines 46, 47*. In phase 2, the non-essential values of the data objects are recovered. *Col. 7, lines 31 and following*. Nowhere does Connor discuss ascertaining the success or failure of the recovery operation. Nowhere does Connor discuss designating a data object as consistent or inconsistent. Connor therefore does not teach or even suggest the recited “performing a data recovery operation on a snapshot” and “if the operation is successful, then designating the snapshot as being consistent, and if the operation is unsuccessful, then designating the snapshot as being inconsistent.”

Claim 1 further recites in part “presenting information for each snapshot including whether said each snapshot is consistent or inconsistent.” See also claims 8 and 17. Connor does not discuss the idea of presenting information relating to whether a data object was successfully recovered or not. Connor therefore does not show this recited limitation in the pending claims.

Claim 1 further recites in part “applying the operating system data recovery program to the snapshot” to perform the data recovery operation. Connor’s data objects are objects created by an application program, and thus can only be recovered by a program associated with the application. Connor therefore does not teach or even suggest this recited limitation of the claims.

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PATENT

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,


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